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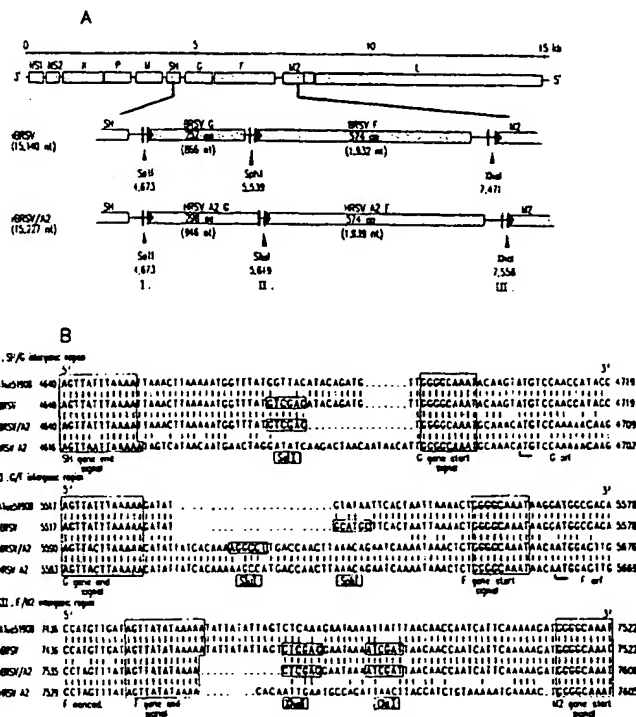
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(54) Title: PRODUCTION OF ATTENUATED, HUMAN-BOVINE CHIMERIC RESPIRATORY SYNCYTIAL VIRUS VACCINES



(57) Abstract: Chimeric human-bovine respiratory syncytial virus (RSV) are infectious and attenuated in humans and other mammals and useful in vaccine formulations for eliciting an anti-RSV immune response. Also provided are isolated polynucleotide molecules and vectors incorporating a chimeric RSV genome or antigenome which includes a partial or complete human or bovine RSV "background" genome or antigenome combined or integrated with one or more heterologous gene(s) or genome segment(s) of a different RSV strain. Chimeric human-bovine RSV of the invention include a partial or complete "background" RSV genome or antigenome derived from or patterned after a human or bovine RSV strain or subgroup virus combined with one or more heterologous gene(s) or genome segment(s) of a different RSV strain or subgroup virus to form the human-bovine chimeric RSV genome or antigenome. In preferred aspects of the invention, chimeric RSV incorporate a partial or complete bovine RSV background genome or antigenome combined with one or more heterologous gene(s) or genome segment(s) from a human RSV. Genes of interest include any of the NS1, NS2, N, P, M, SH, M2(ORF1), M2(ORF2), L, F or G genes or a genome segment including a protein or portion thereof. A variety of additional mutations and

nucleotide modifications are provided within the human-bovine chimeric RSV of the invention to yield desired phenotypic and structural effects.